IN THE CLAIMS:

The status of each claim that has been introduced in the above-referenced application is identified in the ensuing listing of the claims. This listing of the claims replaces all previously submitted claims listings.

1. (Previously presented) A precursor to a semiconductor device structure, comprising:

a semiconductor device layered structure comprising a semiconductor substrate;

a buffer film layer located over at least a portion of the semiconductor substrate;

at least one trench formed in the semiconductor device layered structure; and

at least one shallow trench isolation structure positioned at least partially within the at least one trench and including:

a substantially flat surface; and

an integral ledge which extends laterally outward from the at least one trench, with no discernable boundary between the integral ledge and a remainder of the at least one shallow trench isolation structure, so as to contact only an area of an active surface of the semiconductor substrate adjacent the at least one trench.

2. (Previously presented) The precursor of claim 1, wherein the buffer film layer comprises substantially oxidation resistant material.

3. (Previously presented) The precursor of claim 2, wherein the substantially oxidation resistant material is selectively etchable.

4. (Previously presented) The precursor of claim 1, wherein a lateral edge of the integral ledge contacts the buffer film layer.

5. (Previously presented) The precursor of claim 1, wherein the at least one shallow trench isolation structure comprises densified material.

6. (Previously presented) The precursor of claim 1, wherein the buffer film layer comprises silicon nitride.

7. (Previously presented) An intermediate semiconductor device structure, comprising:
a semiconductor substrate including at least one trench formed therein and at least one trench corner located at a juncture between the at least one trench and an active surface of the semiconductor substrate; and
a buffer film layer over at least portions of the active surface; and
at least one densified trench isolation structure including a substantially flat surface exposed through the buffer film layer, the at least one trench corner being covered by the at least one densified trench isolation structure.

8. (Canceled)

9. (Previously presented) The intermediate semiconductor device structure of claim 7, further comprising:
a layer comprising silicon oxide disposed within the at least one trench and between the semiconductor substrate and the buffer film layer.

10. (Previously presented) The intermediate semiconductor device structure of claim 9, wherein the layer comprises densified silicon dioxide.

11. (Previously presented) The intermediate semiconductor device structure of claim 7, wherein the at least one densified trench isolation structure comprises densified material.

12. (Previously presented) The intermediate semiconductor device structure of claim 7, wherein the buffer film layer comprises silicon nitride.

13. (Previously presented) An intermediate semiconductor device structure, comprising:
a semiconductor substrate including at least one trench formed therein and at least one trench corner located at a juncture between the at least one trench and an active surface of the semiconductor substrate; and
at least one trench isolation structure including a substantially flat surface, the at least one trench isolation structure extending laterally over and contacting only a portion of the active surface adjacent the at least one trench corner so as to electrically isolate the at least one trench corner.

14. (Previously presented) The intermediate semiconductor device structure of claim 13, wherein the at least one trench isolation structure comprises densified silicon dioxide.

15-17. (Canceled)

18. (Previously presented) A precursor to a semiconductor device structure, comprising:
a semiconductor substrate;
at least one trench formed in the semiconductor substrate;
a buffer film layer over an active surface of the semiconductor substrate;
and at least one shallow trench isolation structure at least partially within the at least one trench and exposed through the buffer film layer, the at least one shallow trench isolation structure including at least one integral ledge extending laterally outward from the at least one trench, with no discernable boundary between the at least one integral ledge and a remainder of the at least one shallow trench isolation structure, so as to contact an area of the active surface adjacent the at least one trench.

19. (Previously presented) The precursor of claim 18, wherein the at least one shallow trench isolation structure includes a substantially planar surface.

20. (Previously presented) The precursor of claim 18, wherein the at least one shallow trench isolation structure comprises densified silicon oxide.

21. (Previously presented) The precursor of claim 18, wherein the buffer film layer comprises silicon nitride.

22. (Currently amended) The precursor of claim 18, wherein the ~~buffer film layer~~ at least one shallow trench isolation structure comprises densified material.

23. (Previously presented) The precursor of claim 18, wherein the buffer film layer comprises substantially oxidation resistant material.

24. (Previously presented) The precursor of claim 23, wherein the substantially oxidation resistant material is selectively etchable.